

FIG. 1

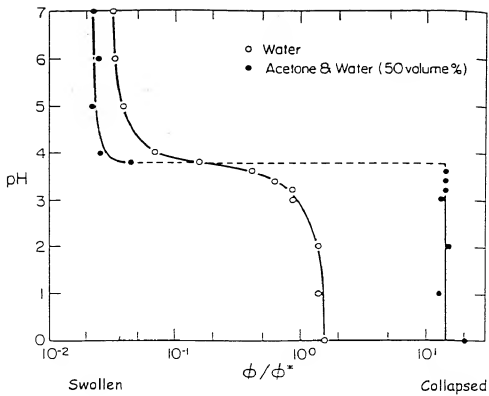
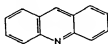


FIG. 2

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Reaction	Example	pK(S ₀)	pK(S ₁)	pK(T ₁)	ΔpK
$-\text{CO}_2\text{H} \rightleftharpoons -\text{CO}_2^- + \text{H}^+$	2-Naphthoic acid	4.2	11.0	4.0	0.2
$-\text{OH} \rightleftharpoons -\text{O}^- + \text{H}^+$	2-Naphthol	9.5	2.8	8.1	1.4
$-\text{NH}_3^+ \rightleftharpoons -\text{NH}_2 + \text{H}^+$	2-Naphthylamine	4.1	-2.0	3.3	0.8
$-\text{NO}_2\text{H} \rightleftharpoons -\text{NO}_2^- + \text{H}^+$	Nitrobenzene	-11.3	2.3	-9.3	2.0
$\text{Ar} \text{=NH}^+ \rightleftharpoons \text{Ar} \text{=N} + \text{H}^+$	Acridine	5.5	10.6	5.6	0.1

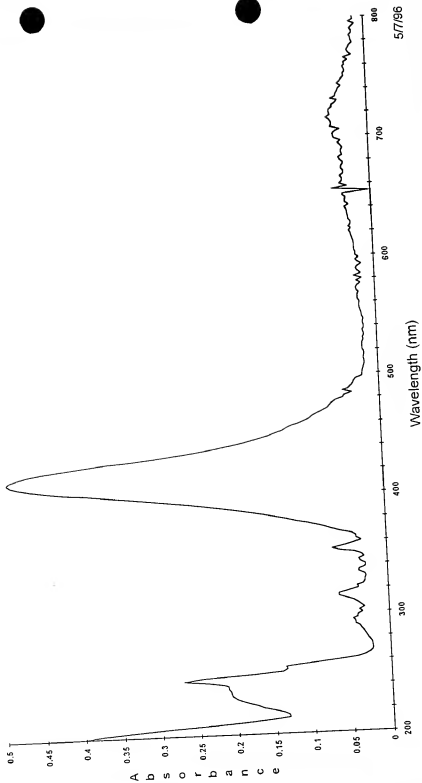


$$\Delta pK = pK(T_1) - pK(S_0)$$

F16.3

002150 280m2500

Anthracene Zero-time Spectrum



F154

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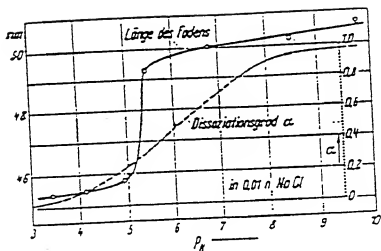


FIG. 5